



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*h*

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/604,627   | 08/06/2003  | Wen-Yueh Jang        | 11112-US-PA         | 1626             |
| 31561  | 7590        | 09/23/2004           | EXAMINER            |                  |
| JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE<br>7 FLOOR-1, NO. 100<br>ROOSEVELT ROAD, SECTION 2<br>TAIPEI, 100<br>TAIWAN |             |                      | SOWARD, IDA M       |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2822                |                  |

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                                |  |
|------------------------------|-------------------------------|--------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/604,627 | Applicant(s)<br>JANG, WEN-YUEH |  |
|                              | Examiner<br>Ida M Soward      | Art Unit<br>2822               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-17 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This Office Action is in response to the Applicant's amendment filed June 29, 2004.

### ***Drawings***

The objection to the drawings has been withdrawn due to the amendment filed.

### ***Specification***

The objection to the abstract has been withdrawn due to the amendment filed.

The objection to the disclosure has been withdrawn due to the amendment filed.

Applicant failed to respond to the objection to the title. Therefore, it still stands.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2822

Claims 1-2, 4-5 and 7-9 are rejected under 35 U.S.C. 102(a, b) as being anticipated by Admitted Prior Art Figure 1.

In regard to claim 1, Admitted Prior Art Figure 1 teaches a resistance random access memory structure, comprising: a plurality (inherent, one cell shown) of word lines 102 in a substrate 100; a plurality of reset lines 104 coupled to the word lines; a dielectric layer 114 on the substrate 100; a plurality of memory units 107 in the dielectric layer, each the memory including a bottom electrode 108, a top electrode 110, and a resistive thin film 112 between the top electrode and the bottom electrode, the bottom electrodes of the memory units in a same column being coupled to one of the reset lines 104; and a plurality of the bit lines 118 on the memory units, the top electrodes of the memory units in a same row being coupled to one of the bit lines (paragraph [0007]).

In regard to claim 2, Admitted Prior Art Figure 1 teaches the ion type (P) of the reset lines being opposite to the ion type (N) of the word lines (paragraph [0007]).

In regard to claim 4, Admitted Prior Art Figure 1 teaches a word line contact window 116 in the dielectric layer 114, wherein the word line contact window is coupled to the word line 102 (paragraph [0007]).

In regard to claim 5, Admitted Prior Art Figure 1-2 teaches a plurality of doped regions 104 & 106 in the word line 102, wherein the doped region 106 is coupled to the word line contact window 116, and wherein an ion types (N) of the doped region 106 and the word line 102 is same (paragraph [0007]).

In regard to claim 7, Admitted Prior Art Figure 1 teaches the memory unit 107 in a same column set on a surface of the reset lines 104 (paragraph [0007]).

Art Unit: 2822

In regard to claim 8, Admitted Prior Art Figures 1 teaches a resistive thin film material being resistance-reversible (paragraph [0005]).

In regard to claim 9, Admitted Prior Art Figure 1 teaches a resistive thin film material selected from colossal magneto resistive thin films and oxidation thin films having Perovskite structure (paragraphs [0005]-[0006]).

***Allowable Subject Matter***

Claims 10-17 are allowed.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 06-29-04 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention on page 11 of the remarks, it is noted that the features upon which applicant relies (i.e., the reset line formed laterally extended along the word line, and the memory units being coupled to the same reset line) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification

Art Unit: 2822

are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the remark concerning each memory unit 107 in the admitted prior art Figure 1 is coupled to an individual P+ region 104, admitted prior art Figure 1 discloses the claimed invention of a plurality of reset lines 104 coupled to the word lines; a plurality of memory units 107 in the dielectric layer, each the memory including a bottom electrode 108; a plurality of memory units 107 in the dielectric layer, each the memory including a bottom electrode 108 and the memory unit 107 in a same column set on a surface of the reset lines 104 (paragraph [0007]).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Art Unit: 2822

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M Soward whose telephone number is 571-272-1845. The examiner can normally be reached on Monday - Thursday, 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMS  
September 17, 2004

  
AMIR ZARABIAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800